CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.03/HSP/WMM/Gradation/2014-15

15.10.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : Asst. Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : Mr. H.S. Palakashamurthy, Contractor, Bangalore.

Name of Work : Providing asphalting and RS slab drains at law college cross roads in Attur, Ward No.03, BBMP, Bangalore.

Reference : BBMP/AEE/YNSD/492/2014-15 Dated: 13.10.2014

Date of Testing : 15.10.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 25300

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	890	890	3.5	96.5	95-100
22.4	5745	6635	26.2	73.8	60-80
11.2	5380	12015	47.5	52.5	40-60
4.75	4195	16210	64.1	35.9	25-40
2.36	3820	20030	79.2	20.8	15-30
0.600	2345	22375	88.4	11.6	8-22
0.075	2540	24915	98.5	1.5	0-8

Note:

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15.10.2014

Aggregate Impact Value

IS: 2386 Part IV

Client	Asst. Executive Engineer, Yelahanka New Town Sub Division, BBMP, Ban
Agency	Mr. H.S. Palakashamurthy, Contractor, Bangalore.
Name of the Work	Providing asphalting and RR slab drains at law college cross roads in Attur, Ward. No.03, BBMP, Bangalore.
Reference	BBMP/AEE/YNSD/492/2014-15 Dated: 13.10.2014
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	15.10.2014

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	385	386	
2	Weight of aggregate passing 2.36 mm sieve after the test = W_2 g	85	86	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	300	300	
4	Aggregate Impact value = percent fines $100*(W_2/W_1)$%	22.08	22.28	22.01

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Comments

— Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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Job No : CTCE/BBMP/WNo.63/ESP/WMM/ST/2014-15 15.10.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.
Agency	**Mr. H.S. Palakashamurthy,** Contractor, Bangalore.
Name of Work	Providing asphalting and BS slab drains at law college cross roads at Amur, Ward No.09, BBMP, Bangalore.
Reference	BBMP/AEE/YNSD/492/2014-15 Dated: 13.10.2014
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	15.10.2014

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Result : Flakiness Index = 11.96%

Elongation Index = 13.65%

Result : Combined Flakiness & Elongation index 25.61%

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

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Lab No: CTCE/BBMP/WNo.03/HSP/WMM/AL/2014-15

15.10.2014

ATTERBERG LIMITS TEST FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : **Mr. H.S. Palakashamurthy,** Contractor, Bangalore.

Name of Work : Providing asphalting and BS slab drains at law college cross roads in Amar, Ward No.03, BBMP, Bangalore.

Reference : BBMP/AE(S)/YNSD/492/2014-15 Dated: 13.10.2014

Date of Testing : 15.10.2014

Material : WMM

Sample Location : WMM Mix Plant

As per MORTH Table 400-11

Sl. No.	Particulars	Test Results	Standards as per Specifications
1	Liquid Limit, %	23.50	25.0% Maximum.
2	Plasticity Index, %	Non Plastic	6.0% Maximum

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Job No: CTCE/BBMP/WNo.03/HSP/SDBC/Bit/2014-15 03.11.2014

BITUMEN CONTENT DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IRC:SP:11-1984

CLIENT	Asst. Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
AGENCY	Mr. H.S. Palakashamurthy, Contractor, Bangalore.
NAME OF THE WORK	Providing asphalting and BS slab drains at law college cross roads in Amar, Ward No.03, BBMP, Bangalore.
REFERENCE	BBMP/AEE/YNSD/492/2014-15 Dated: 15.10.2014
SAMPLE I/D	Roads in Amar, Ward No.03, BBMP, Bangalore.
DATE OF TESTING	03.11.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	476	476.5
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	24	23.50
7. Bitumen content in %	4.80	4.70
8. Average	4.75	

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Job No: CTCE/BBMP/WNo.03/HSP/SDBC/Bit/2014-15

03.11.2014

GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS2386 and IRC:SP:11-1984

CLIENT	Asst. Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
AGENCY	Mr. H.S. Palakashamurthy, Contractor, Bangalore.
NAME OF THE WORK	Providing asphalting and BS slab drains at law college cross roads in Amar, Ward No.03, BBMP, Bangalore.
REFERENCE	BBMP/AEE/YNSD/492/2014-15 Dated: 13.10.2014
SAMPLE I/D	Roads in Amar, Ward No.03, BBMP, Bangalore
DATE OF TESTING	03.11.2014

GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	25.36	5.33	5.33	94.67	90-100
4.75	260.1	54.64	59.97	40.03	35-61
2.36	49.56	10.41	70.38	29.62	24-39
1.18	40.23	8.45	78.83	21.17	15-30
0.3	36.25	7.62	86.45	13.55	9-19
0.075	31.24	6.56	93.01	6.99	3-8

Sieve Size in mm	Trail 2				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	27.14	5.70	5.70	94.30	90-100
4.75	264.1	55.42	61.12	38.88	35-61
2.36	50.98	10.70	71.82	28.18	24-39
1.18	30.47	6.39	78.21	21.79	15-30
0.3	35.47	7.44	85.66	14.34	9-19
0.075	37.48	7.87	93.52	6.48	3-8

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Basaveshwaranagar,
Bangalore-560079.

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ja@civiltechconsultants.com / info@civiltechconsultants.com